

**A SYSTEM FOR THE IMPROVED HANDLING OF WAFERS
WITHIN A PROCESS TOOL**

Abstract of the Disclosure

A substrate fabrication system is provided which includes a buffer station located inline between a front docking port and a loadlock chamber, the buffer station being operatively joined with a front handling chamber. Preferred embodiments employ a buffer station having a rack with reduced pitch, or relative spacing between shelves. Additional embodiments provide variable pitch end effectors as part of the disclosed fabrication system.

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